

Rancho La Costa Habitat Conservation Area

**A Dedicated Natural Open Space System Set Aside As Part
of the La Costa Villages and University Commons Developments
(includes the Nelson property)**

**Annual Report
October 2002 - September 2003**

Prepared for:

**U.S. Fish and Wildlife Service
California Department of Fish and Game**

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INTRODUCTION

This report summarizes the management activities carried out at the Rancho La Costa Habitat Conservation Area (Preserve) by the preserve manager from October 1, 2002 to September 31, 2003. The Preserve was created by combining several areas which were dedicated to the Center for long term management from the La Costa Villages and University Commons developments. Specific parcel names have been referred to as the Oaks and Ridge, Greens, Huff, Setter, Wilern, Nelson, Brouwer, Elfin Forest and Winston. From February to about June, 2002, the Center received title to the Oaks and Ridge, Huff, Setter, Wilern and Brouwer parcels. The Center is currently in escrow for the “greens” property, the questhaven parcels, the Choumas-Pappas parcels and the on-site conservation parcels of the University Commons project. The Nelson property was deeded to the Center in 2001, but the Center has not received the management endowment from the U.S. Fish and Wildlife Foundation. Therefore, management activities reported in this document refer only to the parcels under ownership and with the necessary endowments.

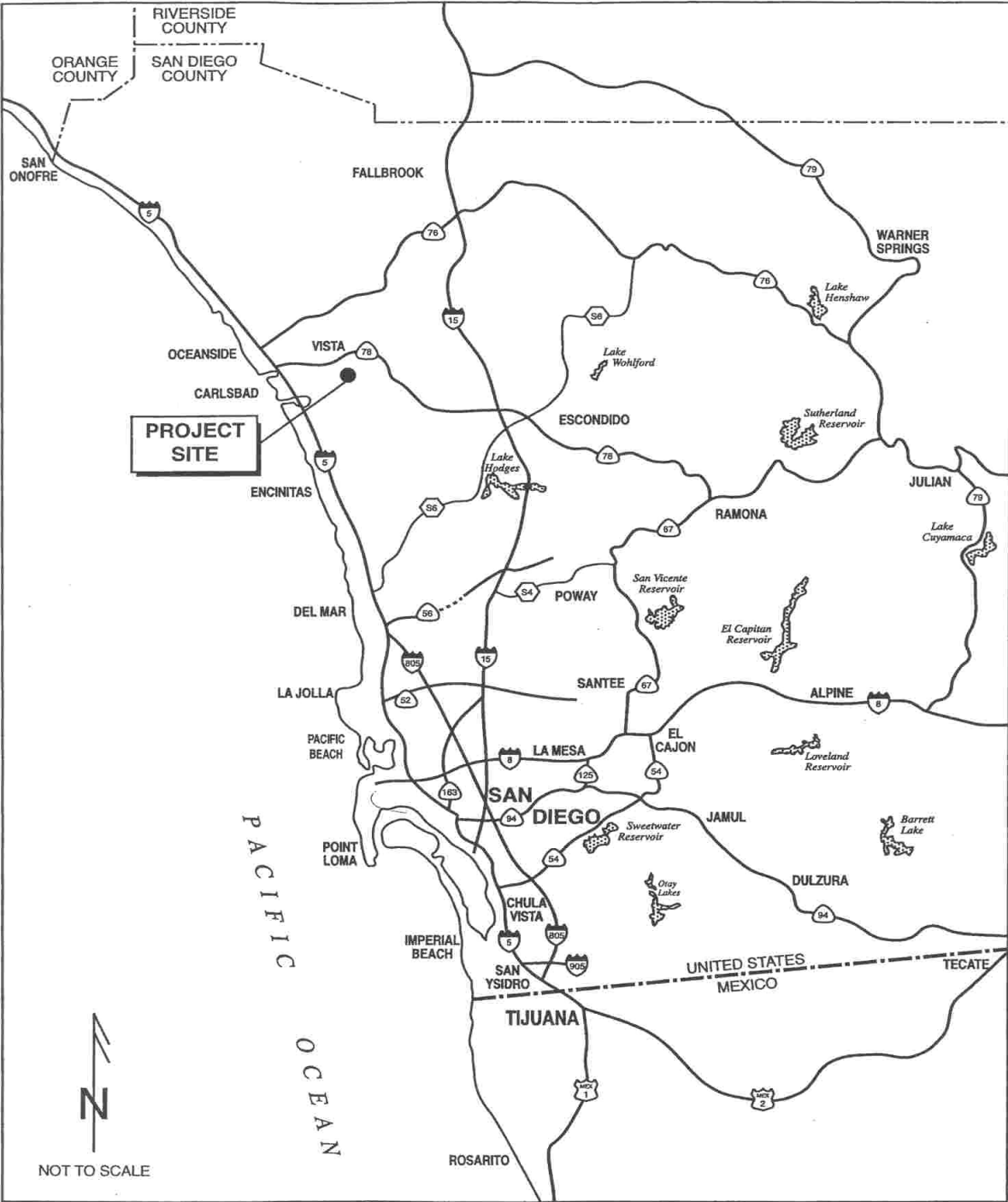
The Preserve is located approximately 2 miles inland from the Pacific Ocean and lies between El Camino Real, near Palomar Airport Road and Elfin forest. (see Figures 1 and 2). The Preserve consists of several parcels separated by roads, homes, golf courses and other developments. Parcel sizes range from a few acres to over 500 acres. Vegetation communities include Diegan coastal sage scrub, chaparral, sycamore/oak woodland, willow woodland, native and non-native grassland, and disturbed areas.

The tasks and objectives discussed below are those derived from the *Habitat Management Plan for La Costa Preserve*, prepared by the Center for Natural Lands Management (Center) in August 2001 and approved by the U.S. Fish and Wildlife Service and California Department of Fish and Game. No management plan has been created for the University Commons or Nelson parcels. However, a revised management plan for both the La Costa and University Commons habitat conservation areas (collectively “Rancho La Costa”).will be prepared once all properties and endowments of these developments have be deeded to the Center.

Management at the Preserve includes signing and maintaining fences and gates (capital improvements), biological surveys, habitat restoration, public services and reporting. Each of these activities and their Year 2003 results are summarized below and fully described within this report.

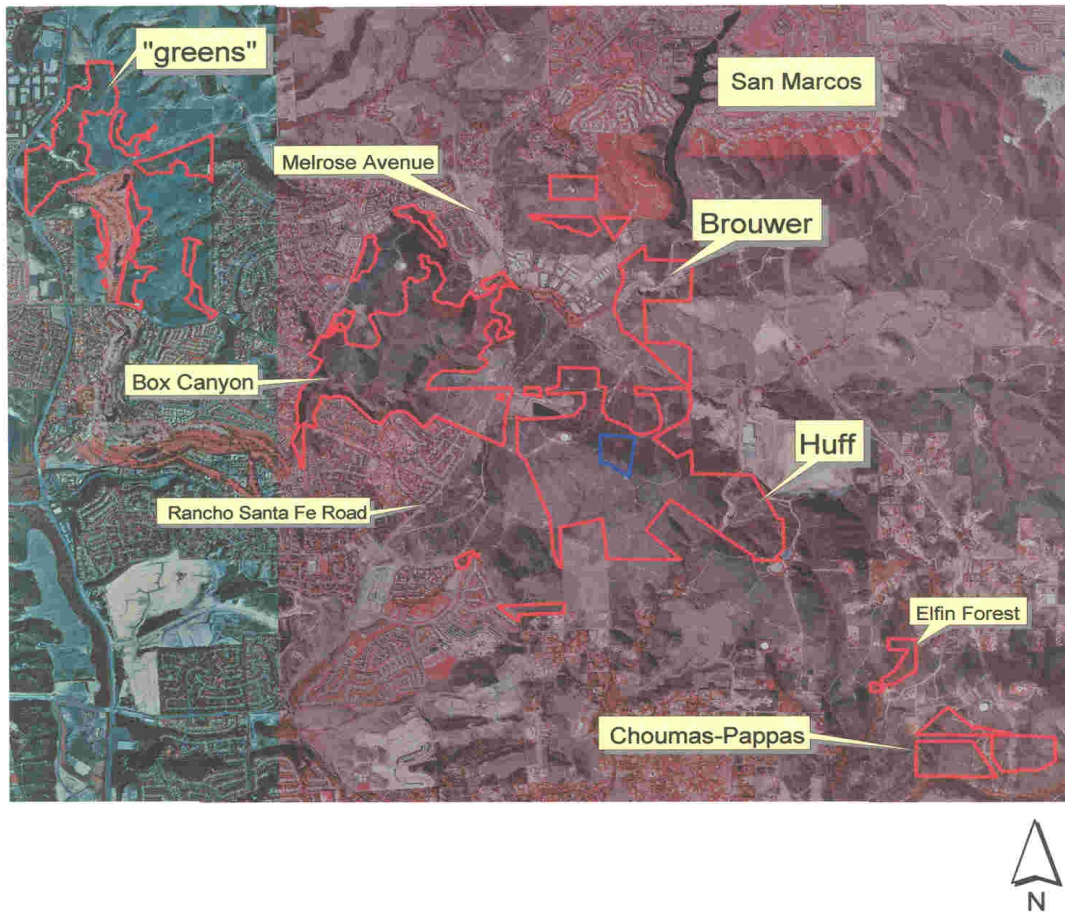
SUMMARY

- 16 pair and one single male coastal California gnatcatcher were observed during bird surveys. A number of other sensitive bird species were observed and noted.
- 36 bird point count stations were set up and monitored three separate times during the



Regional Location Map

Figure 1



 Rancho La Costa Preserve Boundary


 Not a Part of the Preserve Areas

Figure 2
Preserve Vicinity

- spring months.
- Eight reptile pit-arrays were constructed in the fall and late winter of 2002-3. Arrays were opened for three one-week periods in the spring and summer.
- Sensitive plants species were monitored, mapped and counted by Scott McMillan. A plant inventory was completed. Vegetation community analysis was completed at each bird point.
- Signs were place were appropriate within the Preserve.
- Non-native plant species such as eucalyptus, castor bean, ice plant, mustard, acacia and pampas were removed.
- The Center spent considerable time and resources enforcing unwanted trespass.

CAPITAL IMPROVEMENTS

The Center installed two gates in 2003, one at the Choumas-Pappas property and one at the Denning Road entrance off San Elijo Road. Although both gates were vandalized at various times, they have stood fast and have reduced off-road vehicle activity. About 50 additional signs were posted along the periphery of the Preserve and in certain interior locations. Three large 4x6 wood signs were posted at major access points. All signs state that the site is a habitat conservation area, what activities are permitted or illegal, and provides the name and phone number of the Center. No other capital improvements were done during the year.

BIOLOGICAL SURVEYS

Year 2003 was the 2nd year of biological surveys carried out by the Center at the Preserve. Previous surveys had been conducted by numerous biological consulting firms and are reported in the biological impact assessment reports and EIR's for the La Costa Villages and University Commons Open Space Areas.

The *Management Plan* outlines the goals of biological monitoring at the Preserve. The general goal of the monitoring activities at the Preserve at this time is to 1) collect baseline data and 2) begin to develop population trend data on individual species within the Preserve, and for certain taxonomic groups and the vegetation community. This information will allow us to make better informed management decisions should an individual species or population be declining, or possibly increasing, in population size. It should also allow the Center to evaluate changes in the animal community as it correlates to changes in the vegetation communities.

Monitoring in 2003 included general surveys (point counts) for the bird community, focused gnatcatcher surveys, reptile arrays, vegetation community analysis and plant surveys, including sensitive plant surveys.

Table 1 outlines survey dates, times, weather conditions and type of survey conducted. Unless noted otherwise, all surveys and monitoring activities were conducted by Markus Spiegelberg who is permitted by the USFWS and CDFG (USFWS PRT-787-924, Scientific Collectors Permit # 801106-05) for the gnatcatcher and for activities such as small mammal trapping.

1. Reptile and Amphibians

Reptiles and amphibians were noted anecdotally during surveys for other taxa and during three 1-week pit array sessions (Table 1). In the winter of 2003, the Center installed 8 pit-arrays in various arrays of the preserve (Figure 3). Each array has seven 5-gallon buckets separated by about 10 meters. Between each bucket there is a plastic tarp that stands about 16 inches high and acts as barrier and guide so that reptiles and amphibians walk along them and fall in the buckets. No snake traps were used this year, but will be used in future years. Buckets were opened every Monday of each session and closed by Friday.

Results of pit array surveys, by array, is shown in Table 2. Notable species captured include coast horned lizard (*Phrynosoma coronatum*), Gilbert's skink (*Eumeces gilberti rubricaudatus*) and spade-foot toad (*Scaphiopus hammondi*). Other species captured include a black-headed snake (*Tantilla planiceps*), orange-throated whiptail (*Cnemidophorus hyperythrus beldingi*), western whiptail (*Cnemidophorus tigris*), and western fence lizard (*Sceloporus occidentalis*).

Reptile or amphibian species observed anecdotally include the red-diamond back rattlesnake (*Crotalus ruber*), southern pacific rattlesnake (*Crotalus viridis*), the side-blotched lizard (*Uta stansburiana*), San Diego gopher snake (*Pituophis catenifer annectens*), California slender salamander (*Batrachoseps pacificus*), tree frog (*Hyla regilla*) and California whipsnake (*Masticophis lateralis lateralis*). A list of the species captured or observed during the 2003 season is shown in Appendix B and sensitive species are mapped on Figure 3.

2. Birds

The goal of bird surveys in 2003 was to determine the distribution and abundance of coastal California gnatcatchers, and to monitor and begin to collect data on the distribution and relative abundance of bird species using the preserve. In 2003, the Center set up 6 50-acre units for bird studies (Figure 5). Each unit has 6 bird point count locations separated by at least 170 meters between each other. Four of the units were set up in coastal sage scrub having similar structure and species composition. Two of the units were placed in southern mixed chaparral. Each bird point count location was visited three times during the spring for 5 minutes each visit (Table 1). The surveyor recorded all birds observed from 0-50 and 50-100 meters from the point in 0-3 minute and 3-5 minute intervals. The entire unit and surrounding areas were surveyed following the bird point counts to note gnatcatcher locations and to observe other sensitive species. For example, units 1 and 2 would be surveyed in the first two hours of surveying, and then the entire

Table 1. Survey dates, times and weather conditions.

Survey Date	Time	Weather Conditions	Type of Survey*	Location
March 13, 2003	06:30 - 12:00	Overcast to clear, 5 mph wind, 55-65 °F	AC, CAGN	Oaks and Ridge (Areas 1 and 2)
March 17, 2003	08:00 - 12:00	Partly cloudy, 5 -10 mph wind, 57-60 °F	AC, CAGN	Oaks and Ridge, Nelson, Setter (Areas 3 and 4)
March 18, 2003	06:45 - 11:00	Clear, calm, 61-64 °F	AC, CAGN	Brouwer and Huff (Areas 5 and 6)
March 19, 2003	07:00	Clear, calm 65 °F	AC, CAGN	Elfin Forest
March 25, 2003	06:40 - 11:30	Clear, calm, 60-65 °F	AC, CAGN	Oaks and Ridge, Nelson, Setter (Areas 1 and 2)
March 28, 2003	06:15 - 11:00	Clear, breezy, 60-70 °F	AC, CAGN	Oaks and Ridge, Nelson, Setter (Areas 3 and 4)
April 1, 2003	06:00 - 11:00	Clear, calm, 68-72 °F	AC, CAGN	Oaks and Ridge, Nelson, Setter (Areas 3 and 4)
April 7-11, 2003	all day	Generally a clear, mild week with slight breezes, temperature ranging from mid-50's at night to mid-70's during the day	Herp Arrays	Arrays 1-7. (Surveys conducted by Shana Dodd)
April 21, 2003	06:40 - 11:00	Partly cloudy, breezy, 55-65 °F	AC, CAGN,	Oaks and Ridge (Areas 1 and 2)
April 23, 2003	06:45 - 11:00	Partly cloudy, breezy, 57-63 °F	AC, CAGN	Oaks and Ridge (Areas 3 and 4)
April 24, 2003	07:00 - 11:00	Partly cloudy, calm 65-75 °F	AC, CAGN	Oaks and Ridge, Nelson, Setter (Areas 3 and 4)
May 7, 2003	06:15 - 10:45	Partly cloudy, calm, 60 °F	AC	Box Canyon
May 12-16, 2003	all day	Generally a clear week with slight breezes, temperatures ranging from low-60's at night to mid-70's during the day	Herp Arrays	Arrays 1-7 (Surveys conducted by Shana Dodd)

Table 1 continued:

Survey Date	Time	Weather Conditions	Type of Survey*	Location
May 27, 2003	07:00 - 11:00	Clear, calm, 70-75 °F	AC	Choumas-Pappas
May 29, 2003	07:00 - 10:00	Overcast, calm, 65 °F	AC, CAGN	Wilern, Elfin Forest
June 5, 2003	06:00 - 10:00	Overcast, calm, 70 °F	AC, CAGN	Choumas-Pappas
June 16-20, 2003	all day	Generally an overcast week, temperatures between 60 and 65 °F, some drizzle, but calm	Herp Arrays	Arrays 1-7 (Surveys conducted by Shana Dodd)

* CAGN = Directed survey for coastal California gnatcatcher. AC = Avian community point counts.

area of each unit and the adjacent habitat would be surveyed for the 2nd half of the morning. No more than 200 acres was surveyed in one day. Two survey was conducted at the Elfin Forest and Wilern parcels, and two surveys were conducted on the Choumas-Pappas parcels.

Surveys included mapping and noting particular behaviors of the coastal California gnatcatcher, and other sensitive bird species. Any nesting behavior or evidence of nesting or nesting success, was noted for all species. Taped vocalizations of gnatcatchers were used as necessary.

Survey results and notes are listed in Appendix B, and sensitive and notable species are mapped on Figure 4 (except for the rufous-crowned sparrow which is so abundant that the map would be covered in dots). Sensitive species observed include the gnatcatcher, rufous-crowned sparrow, golden eagle, grasshopper sparrow, loggerhead shrike, northern harrier, and Cooper's hawk. Other notable observations two nesting pair of red-tailed hawk (see Figure 4), and an osprey. One red-tailed hawk nested on the power pole at the east end of the Huff parcel, and one nested in the cliff face of the Brouwer parcel. Both nest had nestlings and fledges from both nests were observed during surveys.

16 pair and 1 single gnatcatcher was observed within the survey areas (Figure 4). Breeding activity and behaviors were noted for several gnatcatcher pairs, and a family group was noted for one pair on the choumas-pappas parcels. Rufous-crowned sparrows were very common throughout the preserve and noted on 33 of 36 point locations. They were also observed in areas that were not covered by point counts, such as the elfin forest, wilern and choumass-pappas parcels.

Table 2. 2003 herp array results.

	Array Number*						
Species	1	2	3	4	5	6	7
Western spadefoot toad (<i>Scaphiopus hammondi</i>)			X				
Alligator lizard (<i>Elgaria multicarinatus</i>)		X			X	X	
Orange-throated whiptail (<i>Cnemidophorus hyperythrus beldingi</i>)	X						
Western whiptail (<i>Cnemidophorus tigris multiscutatus</i>)		X	X	X	X		
Western skink (<i>Eumeces skiltonianus</i>)	X	X	X	X			
Gilbert's skink (<i>Eumeces gilberti rubricaudatus</i>)	X						
Coast horned lizard (<i>Phrynosoma coronatum</i>)	X			X			X
Western fence lizard (<i>Sceloporus occidentalis</i>)	X	X	X	X	X	X	X
Side-blotched lizard (<i>Uta stansburiana</i>)	X						
Black-headed snake (<i>Tantilla planiceps</i>)	X						

* see Figure 3 for array location

3. Mammals

No focused surveys for mammals were conducted in 2003. However, some small mammal species were captured in the reptile arrays. Small mammals captured (and not previously captured) include the gopher, western harvest mouse (*Reithrodontomys megalotis*) and shrew (*Sorex ornatus*). Other mammals observed during surveys include cottontail rabbit (*Sylvilagus audubonii*), coyote (*Canis latrans*), California ground squirrel (*Spermophilus beecheyi*) and mule deer (*Odocoileus hemionus*).

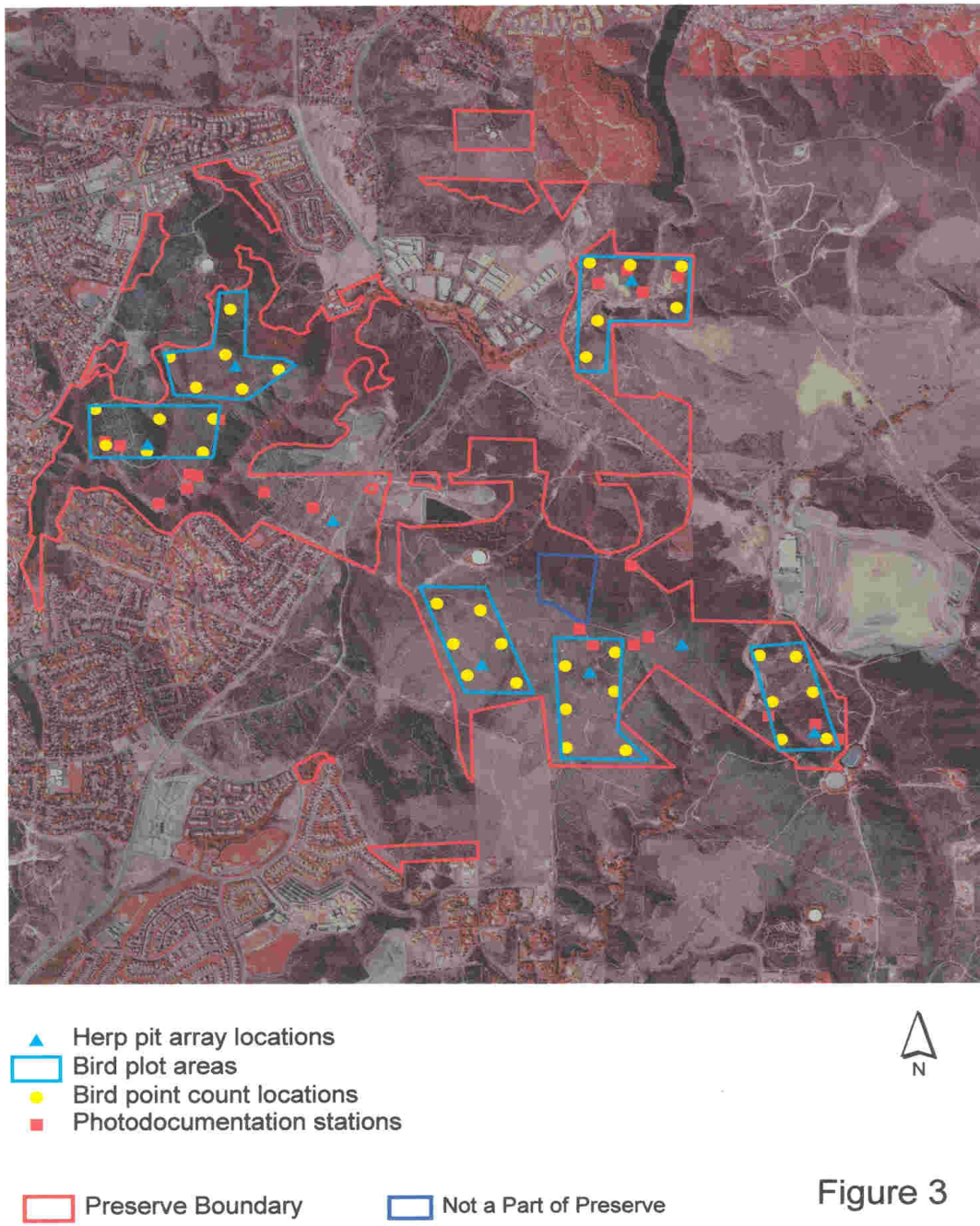
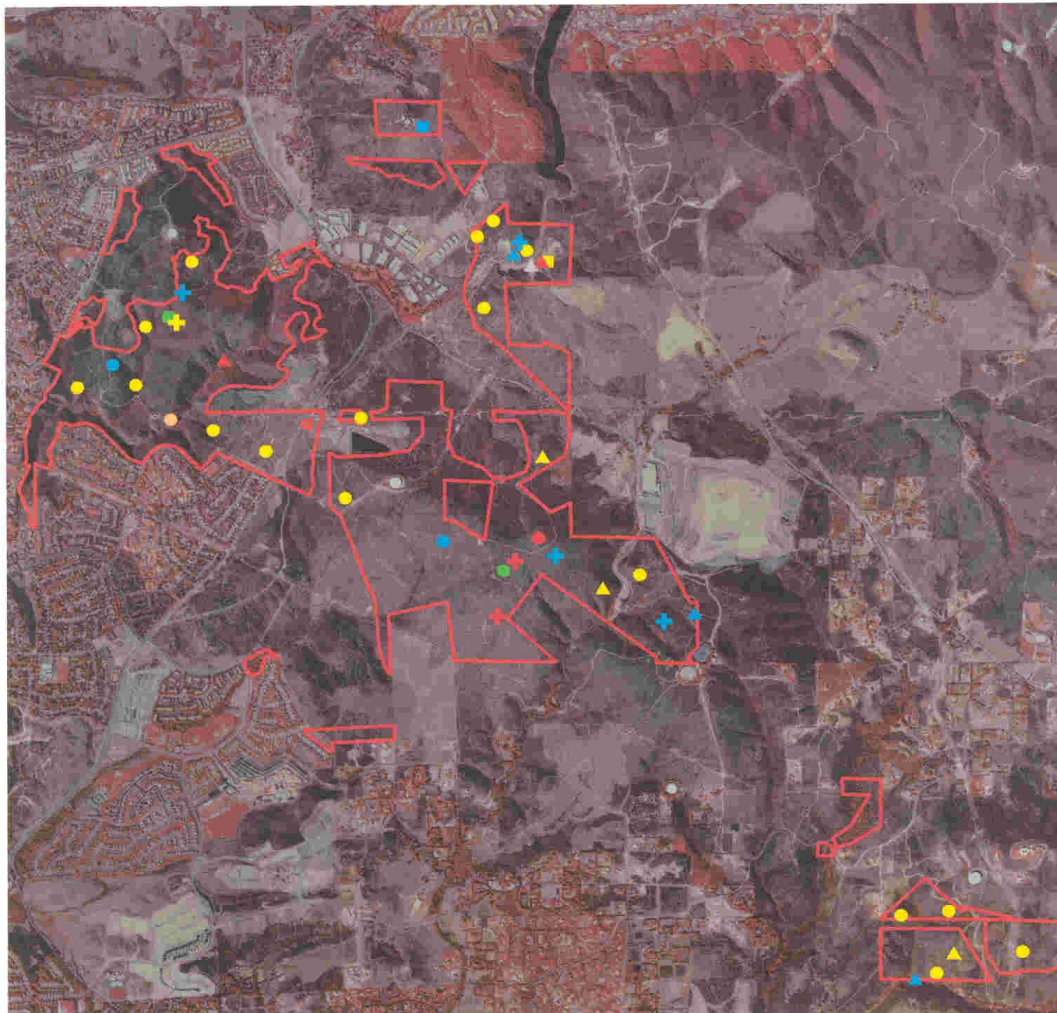


Figure 3



- | | |
|----------------------------------|---------------------------|
| ● Bell's sage sparrow | ▲ Mule deer |
| + Black-tailed jackrabbit | ● Northern harrier |
| ● Coastal California gnatcatcher | ▲ Red-tailed hawk |
| ● Golden eagle | + San Diego horned lizard |
| ● Grasshopper sparrow | + Spadefoot toad |
| ■ Least Bell's vireo | ▲ Yellow warbler |
| ■ Loggerhead shrike | ▲ Yellow-breasted chat |

□ Preserve Boundary

Figure 4

Sensitive Species

4. Vegetation Sampling

In 2003, the Center hired Scott McMillan to conduct vegetation sampling at each bird point count locations. At each bird point locations, Scott placed two 50 meter transects, one going south to north and the other east to west, across the point (i.e. the 25 meter mark of each transect is at the actual point location). At each transect, Scott took measurements using the point intercept method. At each one meter interval, the plant species observed and its height is recorded. The goal is to estimate cover of all plant species and to start tracking the changes in composition as the Center removes non-native species from the preserve. Unfortunately, Scott could not provide the data in time to incorporate into this report, but it will be provided in next years report.

5. Plant Species and Sensitive Plants

During 2003, the Center hired Scott McMillan to update or create a plant list for the entire preserve (data not provided in time for this report), except the Chomass-Pappas parcels (in escrow), and to map and note the population sizes of sensitive plant species (Figures 5-8). Most notably, Scott found a population of about 1000 San Diego thornmint (*Acanthomintha ilicifolia*) on the “greens” property that had not been previously identified. Scott also re-located populations of thread-leaved brodiaea (*Brodiaea filifolia*) and Cleveland’s goldenstar (*Muilla clevelandii*). Most of the sensitive species locations have been mapped using GPS and/or were hand-mapped on aerial photographs and then entered into GIS. Table 3 summarizes historical and current sensitive plant information at the preserve.

Table 3. Sensitive Plant Species Population Estimates

Plant Species	Population Estimates	
	Historical*	2003
San Diego thornmint (<i>Acanthomintha ilicifolia</i>) Endangered , MHCP covered species	None	1 population ca. 1000 individuals on greens property
California adolphia (<i>Adolphia californica</i>) CNPS List 2	3,100 widespread	Thousands, widespread on greens, edges of Box Canyon and Brouwer.
Del Mar manzanita (<i>Arctostaphylos glandulosa</i> var. <i>crassifolia</i>) Endangered, MHCP covered species	750-850 individuals on “greens” property	<1000 individuals on “greens” property.

San Diego sagewort (<i>Artemisia palmeri</i>) CNPS List 2	“less than 100 individuals” on the Huff parcel	less than 100 individuals on Huff parcel.
Thread-leaved brodiaea (<i>Brodiaea filifolia</i>) Endangered, MHCP covered	approximately 4,610	Approximately 1,350 on greens
Orcutt’s brodiaea (<i>Brodiaea orcuttii</i>) CNPS 1b	none at La Costa Villages, 4,176 corms transplanted to Winston parcel in 2002	717 of transplanted corms flowered on Winston property. Approximately 328 found on Huff, Elfin forest, Brouwer and misc parcels.
Sticky-leaved liveforever (<i>Dudleya viscida</i>) MHCP covered species	“several large populations in San Marcos Creek”	
Wart-stemmed ceanothus (<i>Ceanothus verrucosus</i>) MHCP covered species	“several thousands” on Huff and Brouwer parcels, hundreds on greens	thousands on Huff and Brouwer parcels
Summer-holly (<i>Comarstaphylis diversifolia</i>) MHCP covered species	460 on greens	hundreds on “greens” property, too dense to get accurate count. <5 on Elfin Forest parcel
Western dichondra (<i>Dichondra occidentalis</i>) CNPS List 4	2 to 5 populations	thousands on Oaks, Ridges, Greens, Nelson, Setter and Questhaven parcels
San Diego barrel cactus (<i>Ferocactus viridescens</i>) MHCP covered species	none	none
Palmer’s grappling-hook (<i>Harpagonella palmeri</i>)	3,500 on greens	1,150 on greens only
San Diego marsh elder (<i>Iva hayesiana</i>) MHCP covered species	“Large populations along San Marcos Creek” “several hundred in Copper Creek on Huff parcel”	approximately 600 on greens and 500 on Brouwer parcels.
Southwestern spiny rush (<i>Juncus acutus</i> var. <i>leopoldii</i>) CNPS 4	“Large and small populations” 635 on greens and oaks	70 on greens, 20 in upper tributaries to Box Canyon, more possible in Box Canyon
San Diego golden-star (<i>Muilla clevelandii</i>) CNPS 1B	“Approximately 400 individuals”	<250 observed, but population estimated to be around 1000 on Elfin Forest parcel and around 1,700 for Oaks parcel.
Nuttal’s scrub oak (<i>Quercus dumosa</i>) MHCP covered species	640	many hundred on greens parcel

Engelmann Oak (<i>Quercus engelmannii</i>) MHCP covered species	1	Most likely impacted by development, no others found
Ashy spike-moss (<i>Selaginella cinerascens</i>) CNPS List 4	many patches throughout	many patches throughout entire property

*Data from La Costa Villages and University Commons EIR.

HABITAT RESTORATION

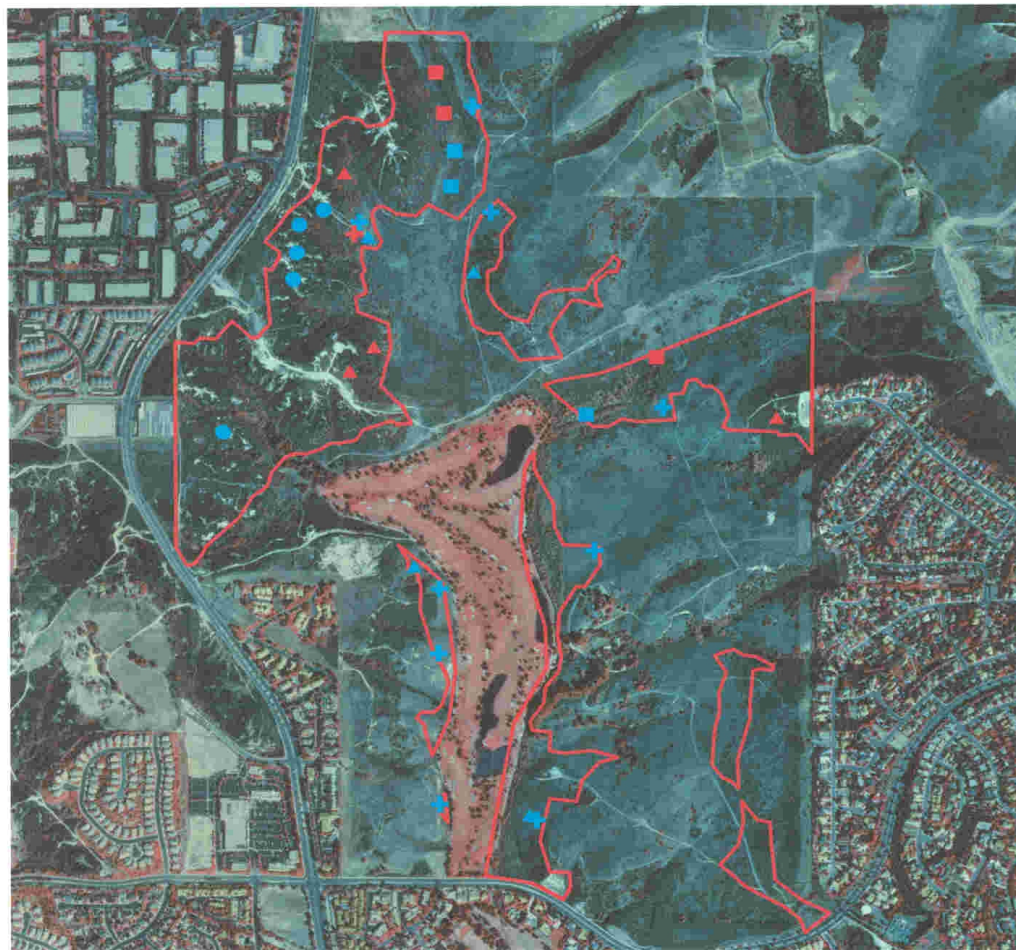
Habitat restoration goals for the Preserve at this time include removing non-native plants and may in the future include other tasks. Most of the Preserve is not overly disturbed by non-native plant species. However, there are several populations of pampas grass, eucalyptus, fennel, ice plant and other non-native species. Also, it should be noted that habitat restoration activities, which include non-native plant removal, will be conducted in 2003-4 on the “greens”, Brouwer and Huff parcels by Morrow Development and Brookfield Homes, the developers of the La Costa Villages and the University Commons Open Space.

In 2002 and 2003 we killed about 150 pampas grass, 10 small Eucalyptus trees, 100 acacia trees (along Cadencia), 100 fennel clumps and various other non-natives. Most significantly was the removal of the acacia along Cadencia, which involved hauling out two 24-foot stakebed trucks worth of plant material.

PUBLIC SERVICE

CNLM public service activities include patrolling, community letters, nature walks and public education. In 2002-3, most of the public service activities at the Preserve involved patrolling and enforcement and meeting with easement holders. Appendix C summarizes all site activities for 2002-3. At this time, the western portion of the Preserve (Box Canyon) is posted as “No Trespassing”. This is either because the Center does not want people in the canyon area, or because access to the Preserve requires people to cross over private land. The eastern portions of the Preserve are open to the public for hiking and mountain biking, but no motorized vehicles or firearms are allowed.

The Center patrolled the Preserve on a regular basis, sometimes during biological surveys and sometimes during directed patrolling efforts. In addition, the Center hired a ranger from July 1 to September 31, 2001 to patrol the entire preserve 4 times a week for 4 hours per day (or 16 hours/week).



Sensitive plant species

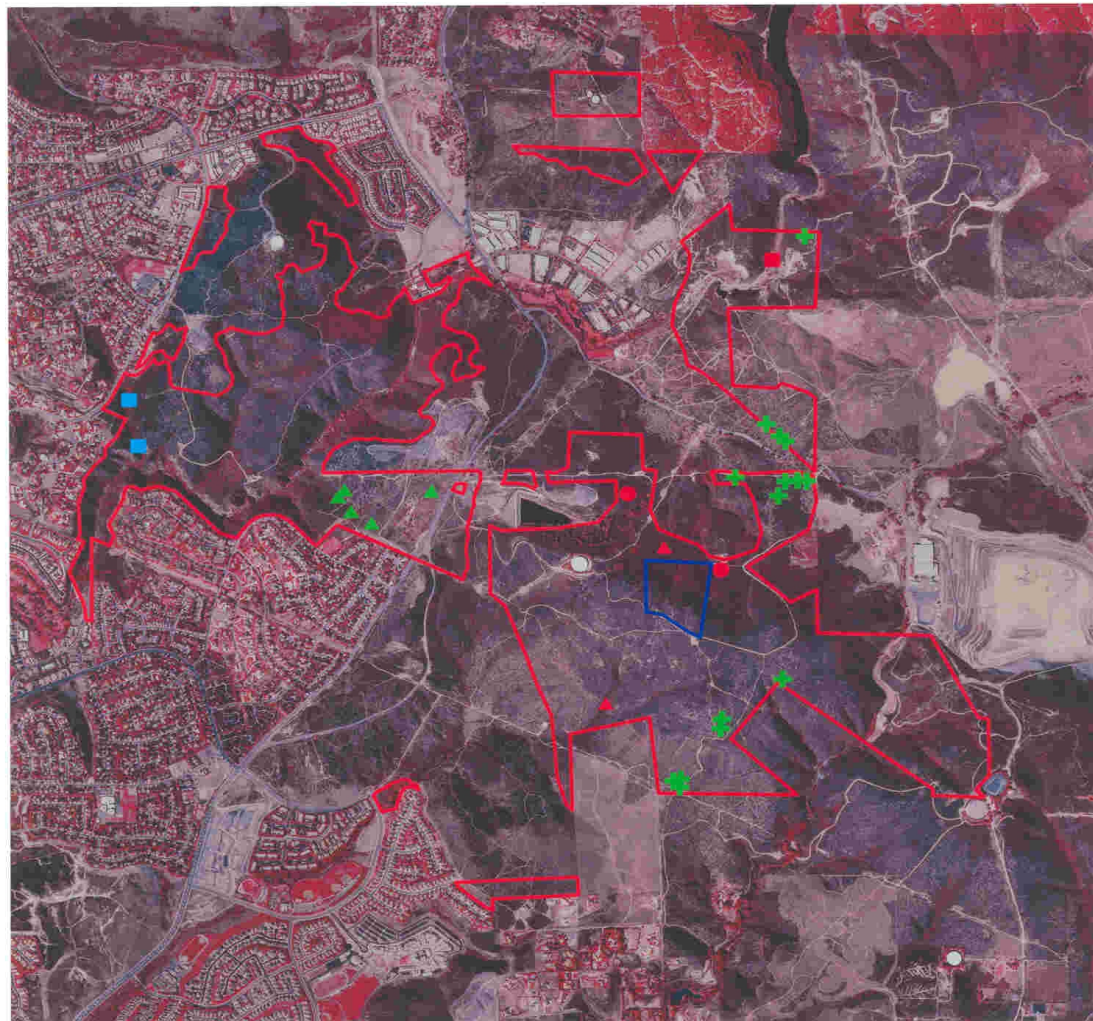
- + Acanthomintha ilicifolia
- + Brodiaea filifolia
- Ceanothus verrucosus
- ▲ Comarostaphylis diversifolia
- ▲ Harpagonella palmeri
- Iva hayesiana
- Juncus actus var. leopoldii

□ Preserve boundary (greens)



Arctostaphylos glandulosa, Adolphia californica, Quercus dumosa and Dicondra occidentalis are very common in northwestern section and are not mapped

Figure 5
Sensitive Plant Species



Sensitive plant species

- *Adolphia californica*
- + *Brodiaea orcuttii*
- ▲ *Comarostaphylis diversifolia*
- *Iva hayesiana*
- *Juncus actus* var. *leopoldii*
- ▲ *Muilla clevelandii*

□ Preserve boundary

□ Not A Part

Selaginella cinerascens, *Dichondra occidentalis*, *Quercus dumosa*, *Ceanothus verrucosus* and most of the *Adolphia californica* are not mapped as they are very common and widespread (see text)



Figure 6

Sensitive Plant Species



Sensitive plant species

- *Adolphia californica*
- + *Brodiaea orcuttii*
- ▲ *Comarostaphylis diversifolia*
- ▲ *Muilla clevelandii*

□ Preserve boundary (Elfin Forest)



Dichondra occidentalis, *Selaginella cinerascens*, and *Quercus dumosa* very common on this parcel

Figure 7

Sensitive Plant Species

In general the Preserve does not see an excessive amount of negative use by people in the area. Motorcycles are observed on occasion, and idiots continue to cliff jump in Box Canyon. In 2002 we had numerous parties and bonfires near Box Canyon and on the Nelson property. We have not seen any evidence of these activities since early 2003 at these locations, but have seen some in the Huff property. The Preserve will be easier to enforce once all the parcels are acquired and proper fencing can be installed.

REPORTING

Reporting activities include report writing, all data analysis, GIS, meetings and regional coordination, and photo documentation activities.

Data that has been entered into ARCVIEW GIS includes sensitive species locations, parcel boundaries, sensitive plant and animal locations, pit array locations and photo-documentation stations.

About 20 photo-documentation stations were set up in 2003 and digital photographs were taken in each location (Figure 3).

At this time preserve management is following the guidelines established in the Habitat Management Plan for the La Costa Preserve prepared by the Center in August 2001 and approved by the wildlife agencies. This Plan only address issues on the La Costa Villages open space areas, and not those on the other parcels. However, the goals are very similar and the management activities can occur simultaneously since the parcels are either adjacent or very near to one another. The Center has requested (separate from this document) from the CDFG and USFWS the permission to merge the accounting, reporting and management of all the parcels listed in this report. The Center was granted permission to merge reporting and therefore, will redraft the management plan to represent all properties as soon as all properties are deeded to the Center.

This report represents the second annual report for the Preserve. An annual work plan for 2003-4 will be provided to the wildlife agencies in December of 2003.

Finally, the Preserve manager has maintained all necessary agency permits to allow the continued monitoring of the Preserve's biota.

SUMMARY & DISCUSSION

Management at the Rancho La Costa Habitat Conservation Area in the second year was successful at protecting the Preserve from human encroachment, building baseline biological data, removing non-natives and developing a better understanding of the Preserve and its regional context. Preserve management in the third year will involve more biological surveys, non-native

removal and public outreach. A detailed work plan for the Year 2003-2004 fiscal year has been developed for this purpose.

Appendix A.

Animal Species Observed

Species Name	Scientific Name	Notes
Invertebrates		
Perplexing hairstreak	<i>Callophrys affinis perplexa</i>	
Behr's metalmark	<i>Apodemia mormo virgulti</i>	
Southern blue	<i>Glaucopsyche lygdamus australis</i>	
California ringlet	<i>Coenonympha californica</i>	
Lorquin's admiral	<i>Liminitis lorquini lorquini</i>	
Anise swallowtail	<i>Papilio zelicaon zelicaon</i>	
Sara orangetip	<i>Anthocharis sara</i>	
Velvet Ant (red variety)		
Dragonfly	Family Libellulidae	
Harvester ants	Family Formicidae	
Jerusalem cricket		
Stink bugs		
Centipede		
Millipede		
Dung beetle		
Wholly bears		
Scorpions		
Many species of spiders		
Mammals		
San Diego desert woodrat	<i>Neotoma lepida intermedia</i>	trapped in 2002
Deer mouse	<i>Peromyscus maniculatus</i>	trapped in 2002
Cactus mouse	<i>Peromyscus eremicus</i>	trapped in 2002
San Diego pocket mouse	<i>Chaetodipus fallax fallax</i>	trapped in 2002
Western harvest mouse	<i>Reithrodontomys megalotis</i>	trapped in 2002
Delzura kangaroo rat	<i>Dipodomys simulens</i>	trapped in 2002
Ornate shrew	<i>Sorex ornatus</i>	
Cottontail rabbit	<i>Sylvilagus audubonii</i>	
Coyote	<i>Canis latrans</i>	
California ground squirrel	<i>Spermophilus beecheyi</i>	
Black-tailed jack rabbit	<i>Lepus californicus bennettii</i>	
Mule deer	<i>Odocoileus hemionus</i>	
Herpetofauna		
Tree frog	<i>Hyla regilla</i>	
Western spadefoot toad	<i>Scaphiopus hammondi</i>	
Alligator lizard	<i>Elgaria multicarinatus</i>	
Western whiptail	<i>Cnemidophorus tigris</i>	

Orange-throated whiptail	<i>Cnemidophorus hyperythrus beldingi</i>
Side-blotched lizard	<i>Uta stansburiana</i>
Western fence lizard	<i>Sceloporus occidentalis</i>
San Diego horned lizard	<i>Phrynosoma coronatum blainvillii</i>
Black-headed snake	<i>Tantilla planiceps</i>
Southern pacific rattlesnake	<i>Crotalus viridis</i>
Red-diamondback rattlesnake	<i>Crotalus exsul</i> (= <i>ruber ruber</i>)
Gopher snake	<i>Pituophis catenifer annectens</i>
California whipsnake	<i>Masticophis lateralis lateralis</i>
Gilbert's skink	<i>Eumeces gilberti rubricaudatus</i>
Western skink	<i>Eumeces skiltonianus</i>

2003 Bird Survey Results

Point County Surveys	Average number of birds observed per plot								
Species	1	2	3	4	5	6	Total	Average per CSS plot (Plots 1-4)	Average per chaparral plot (Plots 4-6)
American Crow	0.3						0.3	0.1	0.0
American kestrel				0.3			0.3	0.1	0.0
Anna's hummingbird	3.7	4.7	1.7	2.3	1.0	1.7	15.0	3.1	1.3
Bewick's wren	0.7	2.3	0.3	0.3	3.7	2.3	9.7	0.9	3.0
Blue grosbeak			0.3		0.7	1.0	2.0	0.1	0.8
Black phoebe						2.0	2.0	0.0	1.0
Bell's sage sparrow	1.0		1.3	1.3			3.7	0.9	0.0
Bushtit	1.0	2.7		0.3	2.3	2.3	8.7	1.0	2.3
California gnatcatcher	0.3	2.7	0.3		1.0	0.7	5.0	0.8	0.8
Cassin's kingbird			0.7				0.7	0.2	0.0
California quail	1.0	0.3	0.3	0.7	3.3		5.7	0.6	1.7
California thrasher	1.0	0.7					1.7	0.4	0.0
California towhee	7.7	4.0	4.7	3.7	7.0	6.0	33.0	5.0	6.5
Costa's hummingbird			0.3		0.3		0.7	0.1	0.2
Common yellowthroat	1.3	0.3	1.3	0.3	3.7	0.3	7.3	0.8	2.0
Grasshopper sparrow	0.3	0.3		0.7	0.3		1.7	0.3	0.2
House finch	0.3					1.3	1.7	0.1	0.7
House wren						0.3	0.3	0.0	0.2
Lazuli bunting		0.3	0.3				0.7	0.2	0.0
Lesser goldfinch	0.7		0.7		1.7	1.7	4.7	0.3	1.7
Morning dove	0.7	0.7				1.0	2.3	0.3	0.5
Northern mockingbird					0.3		0.3	0.0	0.2
Orange-crowned warbler	0.3					1.0	1.3	0.1	0.5
Rufous-crowned sparrow	8.3	5.3	3.0	4.0	2.7	3.3	26.7	5.2	3.0
Say's phoebe			0.3				0.3	0.1	0.0
Song sparrow					0.7	0.7	1.3	0.0	0.7
Spotted towhee	1.3	3.7	0.7	1.3	1.7	2.0	10.7	1.8	1.8
White-crowned sparrow	1.3	2.3			1.0		4.7	0.9	0.5
Western kingbird		0.3		0.7			1.0	0.3	0.0
Western meadowlark			4.7				4.7	1.2	0.0
Western scrub jay					0.3	0.3	0.7	0.0	0.3
Wrentit	2.0	6.0	2.0	0.3	5.0	2.3	17.7	2.6	3.7

Appendix A, continued

Addition bird species observed.

(Flyovers during point count surveys and anecdotal observations)

Species	Average Number of Flyovers per Visit Across all Plots (if applicable)	Notes
Acorn woodpecker		Elfin forest
American Crow	2.3	
Ash-throated flycatcher		in Box Canyon
Belted kingfisher		in Box Canyon
Blue-gray gnatcatcher		
Black and white warbler		
Canyon wren		
Cliff swallow	0.7	
Common raven	4.0	
Cooper's hawk		
Golden eagle	0.3	
Great blue heron	0.3	
Great egret	0.7	
Great-horned owl		
Greater roadrunner		
Hooded oriole		
Horned lark		
Killdeer	0.3	
Least bell's vireo		on Brouwer property
Loggerhead shrike		on Wilern parcel
Mallard	0.3	
Northern harrier	1.0	
Nuttall's woodpecker		
Osprey	0.3	
Pacific-sloped flycatcher		
Poor-will		
Red-tailed hawk	2.3	one nest on Brouwer and one nest on Huff, both successful
Red-shouldered hawk		
Turkey vulture		
White-throated swift	2.7	
Yellow-breasted chat		
Yellow warbler		

Appendix B.

Summary of Site Visit Activities

TimeStamp	Site	Task	HoursSpent
11/1/2002-3/19/03	La Costa/UC/Elfin Forest	Various patrolling activities, trash pick up, fencing and non-native removal by Ranger	16 hrs/wk
7/1/2003-9/31/03	La Costa/UC/Elfin Forest	Patrol and non-native removal	16 hrs/wk
10/4/2002	La Costa	Patrol, pick up trash	2
10/4/2002	University Commons	Patrol, pick up trash	2
10/10/2002	La Costa	Spray about 100 pampas, patrol	3
10/11/2002	La Costa	Patrol	2
10/22/2002	La Costa	Fix fence, patrol	4
10/24/2002	La Costa	Patrol, pick up trash	4
10/30/2002	La Costa	Sign box canyon	4
10/31/2002	La Costa	Sign box canyon	8
11/1/2002	University Commons	Meet with water district to discuss water meter hook up	2
11/3/2002	La Costa	Sign preserve	8
11/4/2002	Elfin Forest	Sign	2
11/4/2002	La Costa	Sign the preserve	6
11/5/2002	La Costa	Patrol and sign	8
11/12/2002	La Costa	Patrol box canyon, hang signs	1.5
11/15/2002	La Costa	Patrol and post signs	7
12/3/2002	La Costa	Patrol and sign	2
12/6/2002	La Costa	Tour Scott McMillan	5
12/10/2002	La Costa	Remove non-native trees and pampas with recon crews	10
12/17/2002	La Costa	and U.C. Put up new signs and gates, patrol, and flag non-native trees to be removed	8
12/18/2002	La Costa	Cut down eucalyptus	8
12/18/2002	La Costa	Post sign, fix gate and chain at El Fuerte	8
12/27/2002	La Costa	Pick up trash and break up fire pit	8
1/2/2003	La Costa	Put up large wood sign posts, patrol	7
1/3/2003	La Costa	Signing	2
1/6/2003	La Costa	Patrol	4
1/7/2003	La Costa	Patrol	4
1/14/2003	La Costa	Patrol	2
1/17/2003	La Costa	McMillan Plant Survey	7
1/20/2003	La Costa	McMillan Plant Survey, CNLM patrol	4.5
1/28/2003	La Costa	Patrol, post signs	4
2/5/2003	La Costa	Fix and post signs, patrol	3
2/8/2003	La Costa	McMillan Plant Survey	6.5
2/14/2003	University Commons	Check huff property mulch area-patrol	3
2/18/2003	La Costa	Meet to select pit array locations	4
2/18/2003	University Commons	Meet to discuss pit array locations	2

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2/21/2003	La Costa	Meet scott m to discuss veg methods	2
2/21/2003	University Commons	Meet scott to discuss veg method	2
2/23/2003	La Costa	McMillan Plant Survey	8
2/24/2003	La Costa	Put in pit arrays	4
2/24/2003	University Commons	Put in pit arrays	4
2/26/2003	La Costa	Install pit arrays	8
2/27/2003	University Commons	Install pit arrays	3
2/27/2003	La Costa	Install pit arrays	3
2/28/2003	La Costa	Install pit arrays	4
3/1/2003	La Costa	McMillan Plant Survey	5
3/5/2003	La Costa	Post signs on new properties, patrol	2.5
3/5/2003	University Commons	Post signs and construct fence	2.5
3/7/2003	La Costa	Patrol	3
3/9/2003	La Costa	McMillan Plant Survey	7.5
3/10/2003	La Costa	Put in pit arrays	8
3/11/2003	La Costa	Install pit arrays	4
3/11/2003	University Commons	Install pit arrays	4
3/12/2003	La Costa	Install pit array	3
3/13/2003	La Costa	Bird survey	6
3/17/2003	La Costa	Bird survey	5
3/17/2003	University Commons	Bird survey	1
3/18/2003	La Costa	Patrol	3
3/18/2003	University Commons	Bird survey, patrol, fix signs and fences	8
3/19/2003	Elfin Forest	Bird survey, patrol	2.5
3/21/2003	University Commons	Met with sdge yesterday to discuss gate options	1.5
3/25/2003	La Costa	Bird survey, patrol and photodocument site	8
3/28/2003	La Costa	Bird survey, meet gate and fence contractor, patrol	10
3/29/2003	La Costa	McMillan Plant Survey	9
3/31/2003	La Costa	McMillan Plant Survey	6
3/31/2003	La Costa	Patrol, pick up trash, fix pit arrays	6
4/1/2003	University Commons	Bird survey	6
4/3/2003	La Costa	Patrol box canyon	1
4/7/2003	La Costa	McMillan Vegetation Transects	4.5
4/8/2003	La Costa	Pit arrays check	6
4/16/2003	La Costa	McMillan Vegetation Transects	4
4/18/2003	La Costa	Check vernal pool for frogs and toads, post signs	1.5
4/21/2003	La Costa	Bird survey	6
4/22/2003	La Costa	Meet gate contractor	1
4/22/2003	University Commons	Meet gate contractor	1
4/23/2003	La Costa	Bird survey	5.5
4/24/2003	University Commons	Bird survey	5
4/25/2003	La Costa	McMillan Vegetation Transects	7
4/30/2003	University Commons	Patrol	2.5
4/30/2003	La Costa	Patrol	2.5
5/2/2003	La Costa	Patrol, put locks on new gates	2
5/5/2003	La Costa	Patrol	2
5/6/2003	La Costa	Patrol	2
5/6/2003	University Commons	Patrol	2

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5/7/2003	La Costa	Patrol, box canyon bird survey	4
5/7/2003	University Commons	Brower lbv survey	1
5/8/2003	La Costa	Fuel management	8
5/9/2003	La Costa	Fuel management	4
5/11/2003	La Costa	McMillan Vegetation Transects	7.5
5/12/2003	La Costa	open pit arrays	6
5/12/2003	University Commons	Open pit arrays	2
5/14/2003	La Costa	McMillan Plant Survey and Vegetation Transects	8
5/14/2003	La Costa	Pit array check, patrol	2
5/16/2003	La Costa	Fuel management, check pit arrays	3
5/16/2003	La Costa	Plant survey	3
5/20/2003	La Costa	McMillan Plant Survey	10.5
5/21/2003	University Commons/Elfin Forest	Patrol elfin forest and chounas, pick up trash	2
5/22/2003	La Costa	McMillan Plant Survey and Vegetation Transects	8
5/27/2003	La Costa/Elfin Forest	Choumas bird survey, patrol Elfin Forest	5
5/28/2003	La Costa	McMillan Vegetation Transects	6.5
5/29/2003	University Commons/Elfin forest	Elfin forest bird survey, wilern cagn survey	3
6/2/2003	La Costa	Patrol, meet police to disuss vandalism in box canyon	4
6/5/2003	La Costa	Choumas bird survey	5
6/7/2003	La Costa	McMillan Vegetation Transects	7
6/9/2003	La Costa	Patrol' meet gate contractor	3
6/10/2003	La Costa	McMillan Plant Survey and Vegetation Transects	8
6/11/2003	La Costa	Meet potential ranger at site	2
6/12/2003	La Costa	Patrol	1
6/13/2003	La Costa	Fix pit arrays, patrol	4
6/14/2003	La Costa	McMillan Plant Survey	3
6/17/2003	La Costa	Patrol	3
6/17/2003	University Commons	Patrol	1
6/20/2003	La Costa	Check and close pit arrays	5
6/22/2003	La Costa	McMillan Vegetation Transects	5.5
6/24/2003	La Costa	Patrol, pick up trash	3
6/28/2003	La Costa	McMillan Vegetation Transects	7.5
7/7/2003	La Costa	McMillan Plant Survey and Vegetation Transects	7
7/12/2003	La Costa	McMillan Plant Survey and Vegetation Transects	5.5
7/17/2003	La Costa	McMillan Plant Survey	3.5
7/21/2003	La Costa	Patrol	3
7/21/2003	University Commons	Patrol	2
7/23/2003	La Costa	Patk	2
8/1/2003	La Costa	Patrol	3
8/7/2003	La Costa	Gps bird pt ct locations	3
8/7/2003	University Commons	Gps bird pt ct locations	2
8/16/2003	La Costa	McMillan Plant Survey	2
8/25/2003	University Commons	Patrol	4
9/5/2003	La Costa	McMillan Plant Survey	6